

GUESTS OF *ECITON HAMATUM* (FAB.) COLLECTED
BY PROFESSOR W. M. WHEELER.

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Through the kindness of Dr. Wheeler I have been able to examine the inquilines which he collected when he discovered a cluster of the army ant, *Eciton hamatum*, on Barro Colorado Island, Panama. A description by Dr. Wheeler of the cluster and of the hitherto unknown female is now in press.

There were among the ants a number of beetles, one *Staphylinus* (*sens. lat.*) *sp.*, two species of *Erchomus* and an *Endomychid*, *Rhymbus sp.*, which were probably merely resting among the branches that held the cluster, as well as the new forms described herein which were evidently true guests.

Though *Eciton hamatum* is one of the commonest of the army ants, this is, as far as I know, the first record of a cluster being examined. The actual files of *hamatum*, numbers of which I have watched, contain few guests compared with the files of of the equally common *E. burchelli*, and it is curious that the genus *Ecitophya*, so common with the latter, is very rare with *hamatum*.

I have included the description of a new species of *Tylois* from Guatemala, long in the National collection.

The holotypes of the new species are in the National Museum.

STAPHYLINIDÆ.

***Xenocephalus panamensis*, sp. nov.**

Length 7.5 mm.

Very near *X. clypeatus* Wasm.

Castaneous, shining; microscopic pubescence lacking on pronotum, finest and very sparse on elytra, more abundant on abdomen, ventral surface, and legs; first ventral sclerite of abdomen with coarse, elongate foveolate punctures and semi-recumbent short setæ; second with a row of separated setigerous

punctures near posterior border and third segment with a much sparser row; legs with long and fine hairs mixed at apices of tibiæ with setæ; coxæ and femora distinctly and regularly punctate.

Head, seen from beneath, about as long as broad, vertex moderately convex, front strongly convex, subcarinate at middle; clypeus submembranous at anterior border, the border broadly arcuate. Labrum transverse, broadest in front, convex, anterior border broadly and feebly concave. Antennæ compressed, basal joint longer than the following two, second joint longer than broad and longer than the third, joints three to ten transverse, terminal ovate, narrow at tip, shorter than two preceding joints together. Pronotum transverse, behind as broad as base of elytra, sides arcuately narrowed to front border, which is shallowly and rather narrowly concave at middle; surface convex. Elytra convex, sides very feebly arcuate in front, more strongly behind middle, posterior corners only slightly projecting, subangulate, border concave at sides, then nearly straight. First three abdominal segments with spinose processes at sides, apex with four teeth visible from above, the two at middle conspicuously larger than the others and rounded at tip.

Type locality.—Barro Colorado, Canal Zone, Panama.
August 1, 1924, W. M. Wheeler.

Host.—*Eciton hamatum* (Fab.)

Described from two specimens.

This is close to *X. clypeatus* Wasm., which lives with the same species of *Eciton* in Santa Catherina, Brazil, but differs from Wasmann's description and figures of that species in having the front of head narrower, the clypeus less emarginate at border, the labrum broader and not narrowed apically, the antennal joints broader and the sides of elytra less convex in outline.

***Leptonia* (s. l.) *hospes* sp. nov.**

Length 1.75 to 2 mm.

Form elongate, moderately shining, except posterior half of abdomen, which is strongly shining above; head, thorax, and elytra coriaceous, abdomen microscopically punctate. Head,

prothorax, elytra, mesosternum, apical four abdominal segments and antennal joints except the three basal and the terminal, dark fuscous, remainder ferruginous. Head, thorax, and elytra very finely, and ventral surface more noticeably, pubescent; stiff erect hairs sparse on margins of head and more abundant on body; fine and silky recumbent hairs in thin rows at margins of abdominal segments above.

Head, excluding labrum, about as broad as long, vertex moderately convex, occipital border and sides behind eyes broadly rounded. Clypeus truncate anteriorly. Labrum transverse, broadly emarginate in front. Eyes longer than their distance to occipital border. Antennæ extending a little beyond posterior border of pronotum; basal joint as long as the second and third together, second joint two-thirds as long as the third; joints four to ten transverse, the last two very strongly so, terminal joint conical and longer than the preceding two together. Pronotum broader than long, broadest in front of middle, with feebly arcuate sides and posterior border, nearly straight anterior border and rounded anterior and posterior angles; surface evenly convex. Elytra at base a little broader than pronotum and at suture about as long as middle of pronotum; sides and posterior border nearly straight, posterior corners subangulate. Abdomen about as broad as elytra, sides nearly parallel to near tip. All joints of subequal length except the terminal of each tarsus.

Type locality.—Barro Colorado, Canal Zone, Panama.
August 1, 1924, W. M. Wheeler.

Host.—*Eciton hamatum* (Fab.)

Described from a small series taken with the host ant.

This species has the middle coxæ rather widely separated and the mesosternal lobe short and broad; the first four joints of the posterior tarsi are subequal, the first scarcely longer than the second and the fifth twice as long as the fourth, for which reasons I am placing it in *Leptonia*. *L. picta* Sharp, also known from Panama, is much larger with more elongate thorax and elytra and is quite differently colored.

Zyras (*sens. lat.*) **ecitonis** sp. nov.

Length 5 mm.

Head, pronotum, antennæ, except first two joints, abdomen except margins of dorsal and lateral sclerites, black; remainder of body dark red-brown, legs yellow. Moderately shining.

Head with a few distinct punctures in occipital region, about as long as broad, arcuate behind eyes and nearly straight at occipital border, at middle with a carina that commences very indistinctly on the vertex and becomes stronger anteriorly, especially on the clypeus. Clypeus nearly straight at anterior border. Labrum five times as broad as long. Eyes very large and convex, more than twice as long as their distance to occipital border. Antennæ stout, basal joint longer than second and third joints together, joints four to ten transverse, terminal connate, longer than the two preceding joints together.

Pronotum a little broader than long with moderately abundant, scattered, large and shallow punctures, each bearing a semi-recumbent hair; scattered on the disc are a few longer erect stiff hairs and the lateral margins bear a series of five long ones; anterior and posterior borders arcuate, anterior corners and front portion of sides broadly rounded, sides behind straight and convergent, posterior corners subangulate; border throughout with a distinct though fine marginal line, most conspicuous on posterior border. Scutellum rugosely punctate. Elytra broader than long, shorter than pronotum, humeri subgibbous, sides feebly arcuate, posterior corners rounded, border nearly straight; surface regularly, abundantly punctate, the punctures distinct, though very much finer than on pronotum, each bearing a fine, silky, semirecumbent yellowish hair, mixed, especially toward the sides, with very sparse, erect black hairs. Abdomen at base slightly narrower than elytra, sides feebly arcuate, segments two, three, and four subequal in length; dorsal surface glabrous, except for a pair of widely separated setigerous punctures at middle of third and fourth sclerites, two pairs of punctures on apical third of the fifth; apical margins with very sparse, black hairs. Apex and ventral surface, as well as meso- and metathorax thinly pubescent.

Type locality.—Barro Colorado, Canal Zone, Panama.

August 1, 1925, W. M. Wheeler.

Host.—*Eciton hamatum* (Fab.)

Described from a single specimen.

In habitus, in the structure of the trophi, antennæ, and in the tarsal formula this species belongs in the genus *Zyras*, but cannot be assigned to any of the indefinite subgenera. It is related to *mimulus* Sharp, but is much longer and differently colored and the thorax is relatively longer.

In form and sculpture *Z. ecitonis* somewhat resembles species of *Tetradonia*, but the latter has the outer lobe of the maxillæ short (in *Z. ecitonis* they are longer than the inner lobe) and very much longer antennæ.

HISTERIDÆ

Synodites bifurcatus sp. nov.

Length 2 mm.

Broadly oval, convex above; dark brownish red, legs lighter, pronotum darker; shining.

Hairs fine and short, suberect, rather strongly bent and bifurcate for nearly half their length (those on legs straighter, simple, and more recumbent), abundant on pronotum and pleuræ, sparser on ventral surface, arranged in rows on elytra.

Head at sides with strong rounded shining margins which become obsolete anteriorly, vertex and front very shallowly concave, with coarse, shallow punctures, separated by reticulate lines; clypeus transverse, truncate, and with a thin fringe of very fine hairs at anterior border. Mandibles with moderately abundant, short, erect, stiff hairs. Pronotum transverse, sides nearly straight, anterior corners very broadly angulate, truncated margin short, feebly arcuate, anterior border concave, posterior border rather strongly arcuate at middle; sides and anterior border with a rounded margin which is thickened at posterior third of sides, and on the sides bears a feebly impressed line; surface evenly convex, with abundant coarse shallow setigerous punctures (some of them "tear shaped"). Disc of elytra with seven striæ (not counting the marginal and sub-

marginal) formed by double rows of coarse, approximate punctures, the sutural straight, the second nearly straight and terminating at two-thirds the distance from posterior to anterior border, the third parallel to the second and a little longer, the others extending to near apical border of elytra and terminating in a punctate area; surface between striæ glabrous. Propygidium and upper portion of pygidium coarsely and shallowly punctate. Prosternum margined at sides, margins converging in front, surface flat and nearly smooth, three times as long as broad; anterior lobe and the propleuræ coarsely rugosely punctate. Mesosternum triangularly projected in front and finely punctate, with a marginal and submarginal line at sides, the latter strongly bent in front; surface with a nearly obsolete carina at middle, sparsely punctate anteriorly and coarsely, confluent punctate at sides between marginal lines and at corners of posterior border. Mesosternum with a basal row of eleven large punctures and a few fine scattered punctures. Lower face of anterior femora and tibiæ rugosely punctate similar to the propleuræ. Posterior tibiæ not broader than the femora, the outer border broadly rounding into the base; anterior tibiæ with a series of nine long separated spiniform teeth.

Type locality.—Barro Colorado Island, Panama
(August 1, 1924.)

Host.—*Eciton hamatum* (Fab.)

Described from one specimen.

Synodites schmidti Lewis, from Bahia, is, judging from the description, close to *bifurcatus*, but has the fourth elytral striæ joined at base to the sutural (in *bifurcatus* they are separate); there is a short, curved stria between the prosternal carina and the coxæ, the mesosternum is not carinate at middle, carinæ at sides of head converge in front to form an angle, and no mention is made of the strongly bifurcate setæ. Both species are very similar in punctation (with "tear-shaped" punctures abundant on the pronotum), in striation and in the structure of the pro- and mesosterna.

Troglosternus ecitonis sp. nov.

Length 2.75 mm.

Form broadly oval, convex above; rufo-piceous, ventral surface and appendages lighter; thorax and legs shining, elytra subopaque.

Head between eyes rather strongly and broadly concave, sides coarsely bimarginate, the inner margins short, the outer convergent at middle, then divergent, forming an hour-glass outline and extending to clypeus, front with four separated foveolate punctures. Clypeus nearly flat, shining and smooth, except for a series of four very coarse punctures near anterior border, which is truncate; front coarsely punctate.

Pronotum transverse, broadest behind, anterior corners obtusely angulate, sides moderately arcuate, anterior border concave, posterior border broadly rounded, median portion of surface convex, basal portion near border with a pair of small deep pits; side portions obtusely gibbous a little behind middle, with three strong costæ, the inner of which is angulately bent near apex of gibbosity, the middle subparallel to the inner, but less sharply bent and the outer one finer, intercepted, and extending forward as a submarginal line to the anterior border; median portion with coarse, widely separated setigerous punctures and sparse very distinct though fine shining reticulate costæ, surface between punctures smooth and shining; gibbous portions of sides smooth between costæ and lateral surface, between marginal and second costæ longitudinally impressed and with a row of coarse punctures. Elytra finely, densely striate longitudinally, some of the striæ on the basal portion bifurcate; disc with four coarser striæ, conspicuous at basal third, then as fine as and continuing with the other dorsal striæ, humeral stria strongly arcuate and coarser than the three others. Propygium and upper half of pygidium rugose-punctate and reticulately striolate, lower half of pygidium with very sparse coarse punctures.

Prosternum broad, nearly flat, margined at sides with sharply impressed submarginal lines that extend on posterior half and are connected by a transverse line, enclosing with the posterior

border a flat impressed surface more shining than the rest; broadly triangularly excised behind, separated from gular plate by distinct transverse line; gular plate not incised.

Mesosternum with a pair of very profound pits adjacent to and inward from the coxæ.

Legs moderately long, shining; anterior and middle tibiæ rather flat, the middle pair subangulately enlarged in front of middle of outer border, concave posterior to this, then roundly enlarged and convex to tip; hind femora about as long as tibiæ, strongly convex on outer and concave on inner surface, thickened at apex; very coarsely and sparsely punctate on outer surface; tibiæ projected and rounded at middle of outer border, the margin concave on either side, margin on basal half with a series of seven short serrate teeth, outer surface strongly convex and overlapping at basal margin, with a very strong impression parallel to the basal two-thirds of margin; inner surface broadly concave, with an impressed marginal line parallel to the lower border and one parallel to the inner border of the tarsal grooves.

Hairs erect, very stiff and abundant on dorsal surface, longer and with flexuous tips on margins of legs, the pygidium, and ventral surface. One specimen is an exception in having the hairs equally abundant, but all longer, flexuous, the others appearing as though they had been neatly trimmed.

Type locality.—Barro Colorado, Panama. August 1, 1924.
W. M. Wheeler.

Host.—*Eciton hamatum* (Fab.)

Described from five specimens.

T. dasypus Bick. from Bahia, the type of the genus, lacks the distinctive punctures on the pronotum, where there are only two strong lateral impressions, and the inner is rounded instead of angulate and the sutural and approximate dorsal striæ are indicated by impressed, smooth lines. Bickhardt's specimen had sparser, very much finer pilosity than any of my series.

***Euxenister wheeleri* sp. nov. (fig. 1.)**

Length 4.5 mm.

Form elongate, subopaque; mandibles, legs, and ventral surface moderately shining; brownish red; hairs of two kinds,

one fine and silky and the other basally very coarse, acutely pointed and spinelike, the former most abundant on the dorsum (especially the pronotum) and legs, and the latter on the dorsum, but present sparsely beneath and, on the prosternum, arranged in thin fascicles and in heavy fascicles on the inner side of the apical third of middle and posterior tibiae.

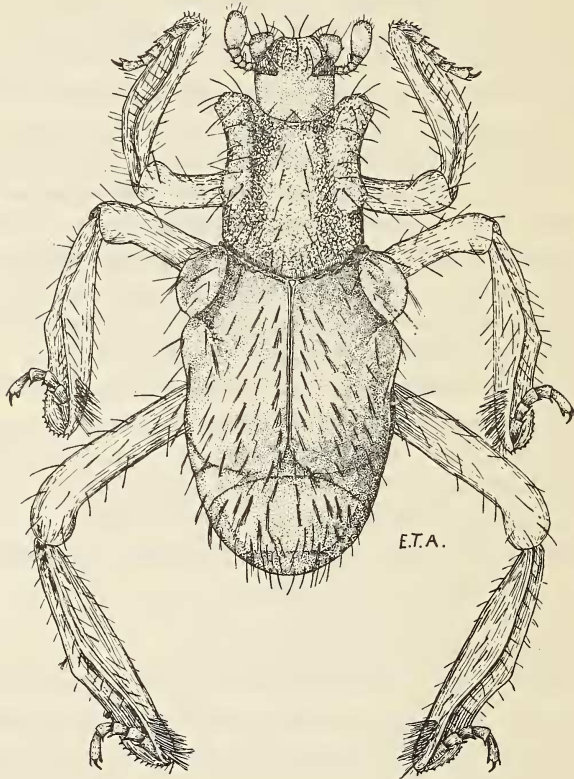


Fig. 1. *Euxenister wheeleri* sp. nov.

Head with the front and vertex feebly concave, sides in front of antennal sockets obtusely margined; clypeus three times as broad as long, anterior border concave; surface rugosely punctulate, with several very indistinct longitudinal striae. Pronotum elongate, discal portion slightly and evenly convex, except for a pair of distinct though shallow impressions near

the posterior third of sides; anterior border concave, posterior border convex; anterior three-fourths of sides elevated into an immense, rounded margin, with concave outer and convex inner sides, projecting forward and slightly outward as somewhat flattened lobes, the outer corners of which are obtusely angulate, the inner corners broadly rounded, terminating behind as thick gibbositities; in profile the dorsal portion of the margin is evenly and shallowly concave; surface rugosely punctate, the disc also with elevated reticulate lines. Elytra densely punctate, more finely than pronotum, not striate; surface at anterior margin with a series of six large, rounded, rather shallow foveæ; anterior two-thirds of sides elevated into a pair of huge marginal masses, subequal in length, the anterior (humeral) one higher and broader than the other, constricted laterally at base, broad above, strongly and broadly impressed longitudinally at middle and very roundly margined at sides; posterior lobe separated from the humeral by a lateral constriction and a narrow transverse impression, broadly concave above, with the margins narrowly rounded, evenly sloping behind to the sides of disc and terminating at two thirds the distance to posterior border of elytra.

Propygidium and pygidium punctate throughout similar to the elytra. Prosternal keel narrow, strongly excised behind, surface nearly flat, sides between coxæ feebly concave, weakly margined, the marginal lines divergent in front, terminating before the middle; surface of lobe rugosely punctate, of keel more finely punctate, with a few foveæ on posterior portion. Mesosternum at sides with sharp elevated margins and at middle with a more elevated longitudinal carina, thickened posteriorly, bordered in front, the surfaces between this and the marginal carinæ strongly concave. Metasternum gibbous at middle near base, impressed in front of this, with an indistinct median longitudinal line.

Legs long, slender, outer borders of tibiæ narrowly cultrate, anterior and middle pair sinuate at outer border, posterior tibiæ feebly and roundly angulate well posterior to middle.

Type locality.—Barro Colorado Island, Panama. Aug. 1, 1925 (Wheeler).

Host.—*Eciton hamatum* (Fab.)

Described from one specimen.

Near *E. asperatus* Reich.; described from a colony of *Eciton quadriglume* (Rio Negro, Parana), but *wheeleri* is larger and lighter colored, with nonstriated elytra; the pronotal marginal swellings are shorter and distinctly terminate before posterior border, those on the sides of elytra smaller and divided by a transverse suture. Both species are remarkable not only for their elongate forms and the large pronotal and elytral marginal masses, but especially for their strong bristles, thickest at bases and pointed apically, quite spikelike. *E. caroli* Reich., the type species of the genus, was taken in a file of *Eciton burchelli* at Blumenan, Brazil, and probably *E. wheeleri* is also a file guest.

Tylois barberi sp. nov.

Length 2.5 mm.

Form broad, convex above; uniformly dark reddish brown, shining.

Vertex feebly concave, very coarsely and foveolately punctate, sides with an elevated, rounded margin, sides of front strongly and broadly elevated as thick carinæ which diverge anteriorly and enclose a narrow triangular flat median surface, separated from the clypeus by an arcuately impressed line. Clypeus three times as broad as long, strongly emarginate at anterior border.

Pronotum less than twice as broad as long, sides convex in front of middle, impressed behind anterior angles, anterior border truncate at sides, with the angles rounded, border bi-concave, median portion rounded, posterior corners rounded, the border truncate at sides of impressions, feebly arcuate at middle, surface with coarse scattered punctures, variable in size and sparse on posterior portion and sides, abundant at middle of anterior fifth, sparse and irregular at lateral borders; disc convex in front of middle, flattened behind at middle and at sides with a pair of large and very profound pits, which are bordered inwardly by short, rather feeble and rounded carinæ and separated from the lateral portions by strong, moderately elevated, rounded carinæ; lateral portions not separated from

the disc by suture, broad, concave, with the side margins moderately elevated; a strong impressed line extending from base to less than half the distance to anterior border.

Elytra very strongly gibbous at humeri, sides in front of middle concave, then rather strongly arcuate and margined to apex; humeral and subhumeral carinæ short, thick, and very strongly elevated, concave and with a row of coarse punctures at top; the two discal carinæ less elevated and short, thick and punctate above; surface concave at base, rather strongly convex behind; large, foveolate punctures sparse and fine punctation between more abundant. Propygidium strongly transverse, coarsely and rather densely foveolate-punctate. Pygidium very sparsely punctate. Prosternum at middle with large elongate, rounded, jet black tubercle; sides behind this margined; posterior border strongly excised; surface behind tubercle and the frontal lobe coarsely punctate. Mesosternum with three strong tubercles similar to those on prosternum, remaining surface very coarsely and densely punctate, at middle with a longitudinal sulcus. First abdominal segment with punctures smaller and more widely separated. Anterior tibiæ at margin with a series of four strong teeth widely separated; middle and posterior tibiæ roundly angulate.

Type locality.—Cacao Tres Aguas, Alta V. Paz, Guatemala (Barber and Schwarz).

The single specimen before me was collected by beating a branch. It is badly rubbed and the only pilosity remaining is at the lateral borders of the pronotum; the hairs are short, rather thick and erect.

T. mirificus Lewis from Pernambuco is closely related, but according to the description has the propygidium and pygidium both sparsely punctate, the keel of the prosternum is smooth and the first ventral abdominal segment smooth in the middle; the middle tibiæ of *barberi* are much less strongly angulate than in *trilunatus* Marseul.

This is the fourth species in the genus, and all of them, both from their systematic position and structure are evidently inquiline, but no host has been recorded.